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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,982	11/23/2005	Christian Taffin	271522US2XPCT	1871

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EXAMINER	
DAGER, JONATHAN M	
ART UNIT	**PAPER NUMBER**
3663	

NOTIFICATION DATE	DELIVERY MODE
12/17/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/534,982	TAFFIN, CHRISTIAN	
	Examiner	Art Unit	
	JONATHAN M. DAGER	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *16 May 2005, 16 August 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The provided specification contains none of the above listings that would separate the specification into distinct sections. The Examiner requests an amended/new specification that would better put the application in compliance with 37 CFR 1.77(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 contains the phrase "means for" in the claim language. This embodiment is supported throughout the specification, and the claim language is subsequently treated under 35 USC 112, sixth paragraph. However, the specification fails to set forth the exact structure, or equivalent thereof, that corresponds to the claimed function.

"If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid the price for use of the convenience of broad claiming afforded by 112, sixth paragraph but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification. If one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as

required by the second paragraph of section 112." See Biomedino, LLC v Waters Technologies Corporation (Fed Cir, 2006-1350, 6/18/2007).

Subsequently, independent claim 9 is drawn to the invention of independent claim 8, and is rejected under similar grounds.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato (US 6,029,107).

Regarding claims 1 and 7-9, as best understood, Sato discloses a method wherein a gear ratio of the automatic transmission is controlled by changing a speed ratio between an input-side rotating member to which the driving force from an engine is transmitted and an output-side rotating member through which the driving force is transmitted to driven wheels. The control apparatus has a vehicle speed detecting part for detecting the speed of the vehicle; a road gradient estimating part for estimating the gradient of road; a gradient determining part for determining whether or not the road gradient estimated by a road gradient estimating part is beyond a predetermined threshold value; a vehicle speed determining part for determining a target vehicle speed based on the vehicle speed detected by the vehicle speed detecting part, when it is determined by the gradient determining part that the road gradient is beyond the predetermined threshold value; and a control part for controlling the gear ratio so that the vehicle

speed can match up to the target vehicle speed determined by the vehicle speed determining part, when it is determined by the gradient determining part that the road gradient is beyond the predetermined threshold value (abstract).

Thus, Sato discloses a method of controlling the gear ratio of an automatic transmission as a function of road gradient and vehicle speed, wherein if the vehicle is traveling beyond a preset threshold with respect to road gradient and speed, a different gear ratio is selected for the vehicle.

Sato discloses that the gear ratio can be automatically controlled according to the condition of road surface so that effective engine brake suitable for a road gradient can be automatically applied on the downhill and effective driving force suitable for the road gradient can be automatically obtained on the uphill (column 1 lines 43-49).

Thus, the method can be used in an uphill or downhill situation.

Regarding claims 3 and 4, Sato discloses that if the absolute value of the road gradient sin .theta. is more than the predetermined threshold value, the target secondary rpm Nst is determined based on the secondary rpm Nsa detected when the absolute value of the road gradient sin .theta. is more than the predetermined threshold value. Further, the gear ratio of the CVT is controlled so as that the secondary rpm Ns of the CVT 2 matches up to the target secondary rpm Nst. According to this embodiment, effective engine braking suitable for a road gradient can be automatically applied on the downhill and effective driving force suitable for the road gradient can be automatically obtained on the uphill, since it is possible to maintain the speed of a vehicle while running on the slope at the speed determined in accordance with the

vehicle speed at the time it enters into the slope. In this embodiment, the target secondary rpm Nst is set to a value obtained by multiplying the secondary rpm Nsa detected when the absolute value of the road gradient sin .theta. is more than the predetermined threshold value by the coefficient k corresponding to the secondary rpm Nsa. According to this embodiment, it is possible to maintain the vehicle speed when the vehicle is running on a slope at an appropriate speed even if the entering speed to the slope is too fast (column 12 lines 6-20).

Regarding claim 5, Sato discloses in fig. 15a-b that as the gradient of the road increases, so does that target gear ratio. Thus, engine power absorption increases with the absolute value of road gradient.

3. Drawings and pictures can anticipate claims if they clearly show the structure which is claimed. See MPEP 2125.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato, as applied to claim 1 above, and further in view of Minowa (US 2002/0095255).

Regarding claim 2, while the invention of Sato is drawn toward reducing brake pad wear by engine braking the vehicle, Sato does not explicitly disclose that braking is absent.

6. Minowa, however, teaches a vehicle deceleration device which can judge the road gradient (para 0039), and also teaches that it is known that better acceleration and deceleration control than in the existing vehicles can be executed only by controlling the engine torque and the speed change ratio and, thereby, traveling as intended by the driver can be achieved (para 0033).

All of the components and methods are known in the above prior art. The only difference is a combination of these elements into a single device.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the engine braking function of Minowa onto the invention of Sato, since both systems could be used in combination to produce the predictable result of utilizing engine braking only operations to retain better control in automatically decelerating the vehicle.

7. Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(a).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato, as applied to claim 1 above, and further in view of Kawano (US 5,129,475).

Regarding claim 6, Sato does not explicitly disclose that the speed deviation falls within 5-10 km/h of the target speed.

9. Kawano, however, teaches a vehicle deceleration control in which the electronic controller 3 calculates current vehicle speed V, based on the signal from the vehicle speed sensor 4, to calculate vehicle speed deviation .DELTA.Vk (=VO-V) between the target vehicle speed VO and the vehicle speed V (Step S1). Then, in Step S2, the electronic controller 3 determines whether the absolute value of the vehicle speed deviation .DELTA.Vk is greater than a predetermined threshold value .DELTA.VKP (e.g., 8 to 3 km/hr). If the absolute value is greater than the threshold value .DELTA.VKP, the program proceeds to Step S3 to carry out a P (constant acceleration) control (column 8 lines 27-43).

FIG. 21 shows a case in which the resume switch 8 is turned on while the vehicle is running down a gentle slope (gradient: 5%) so that the vehicle speed is returned to a target speed of 40 km/hr from 100 km/hr. The P control for constant acceleration is executed between the time t40 at which the resume switch 8 is turned on and the time t41 at which the vehicle speed deviation .DELTA.Vk between the target vehicle speed VO and the vehicle speed V falls within the range .DELTA.VKP, and the PID control is executed between the time t41 and the time t42. After the time t42, the fuzzy control is executed (column 15 lines 41-52).

All of the components and methods are known in the above prior art. The only difference is a combination of these elements into a single device.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the engine braking range of Kawano onto the invention of Sato, since both systems could be used in combination to produce the predictable result of utilizing engine braking operations to maintain the vehicle running speed in an acceptable range.

10. Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. DAGER whose telephone number is (571)270-1332. The examiner can normally be reached on 0830-1800 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JD
09 December 2008

/Jack W. Keith/
Supervisory Patent Examiner, Art Unit 3663